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(54) **SEALING SYSTEM FOR MOVABLE WINDOW OF VEHICULAR REAR SLIDER WINDOW ASSEMBLY**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 56 days.

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(57) **ABSTRACT**

(65) **Prior Publication Data**

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A vehicular slider window assembly includes a movable window panel that is movable along rails at an opening of a fixed window panel. A perimeter seal is disposed at a surface of the fixed window panel and circumscribes the opening and is configured to seal against a surface of the movable window panel when the movable window panel is in a closed position. The perimeter seal includes elongated sealing portions joined at respective corner regions, with adjacent end regions of attachment elements of the sealing portions being spaced from one another at the respective corner regions such that there is a gap between the adjacent end regions. With the attachment elements attached at the surface of the fixed window panel, a sealant is dispensed into the gaps via passageways to seal the corner regions of the perimeter seal at the fixed window panel.

Related U.S. Application Data

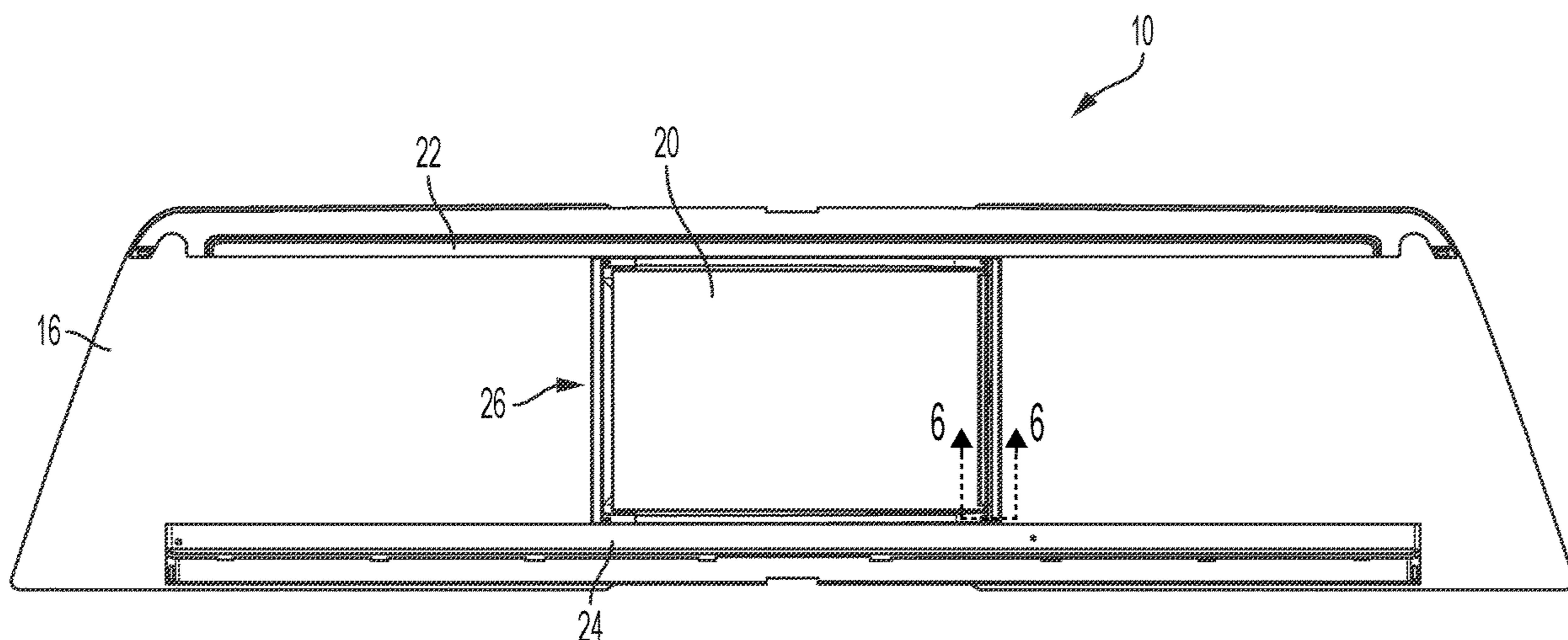
(60) Provisional application No. 62/704,970, filed on Jun. 5, 2020.

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B60J 10/74 (2016.01)
B60J 1/18 (2006.01)

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CPC **B60J 10/74** (2016.02); **B60J 1/1853** (2013.01)

(58) **Field of Classification Search**
CPC B60J 10/74; B60J 1/1853; B60J 10/21
See application file for complete search history.

13 Claims, 8 Drawing Sheets



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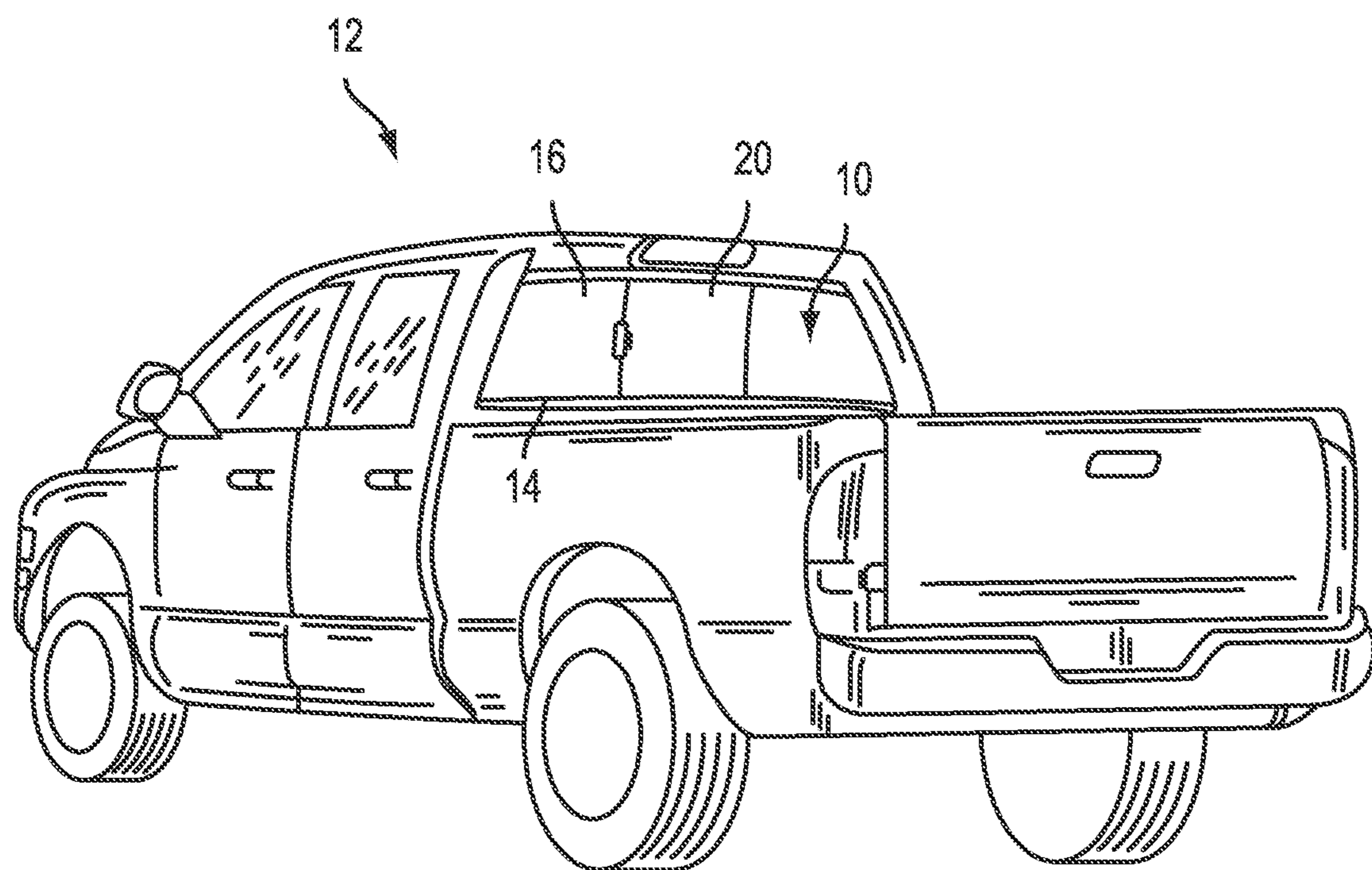


FIG. 1

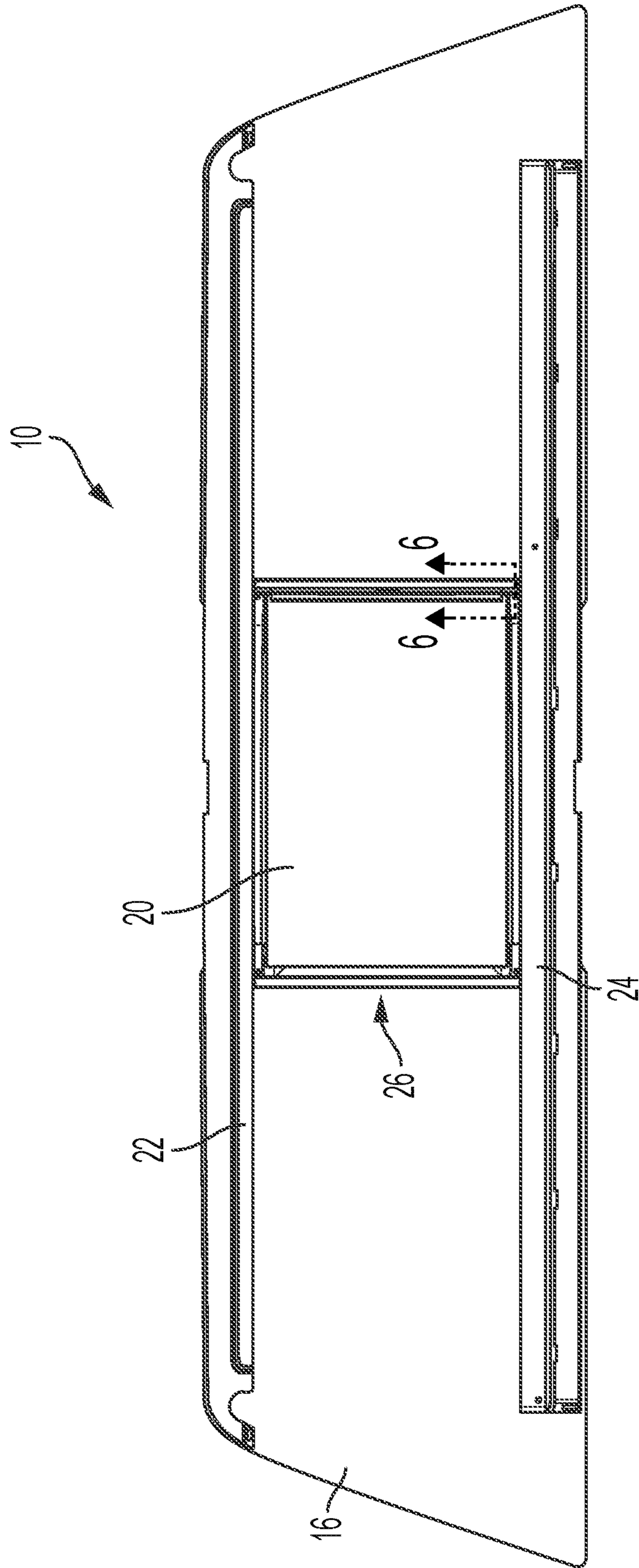


FIG. 2

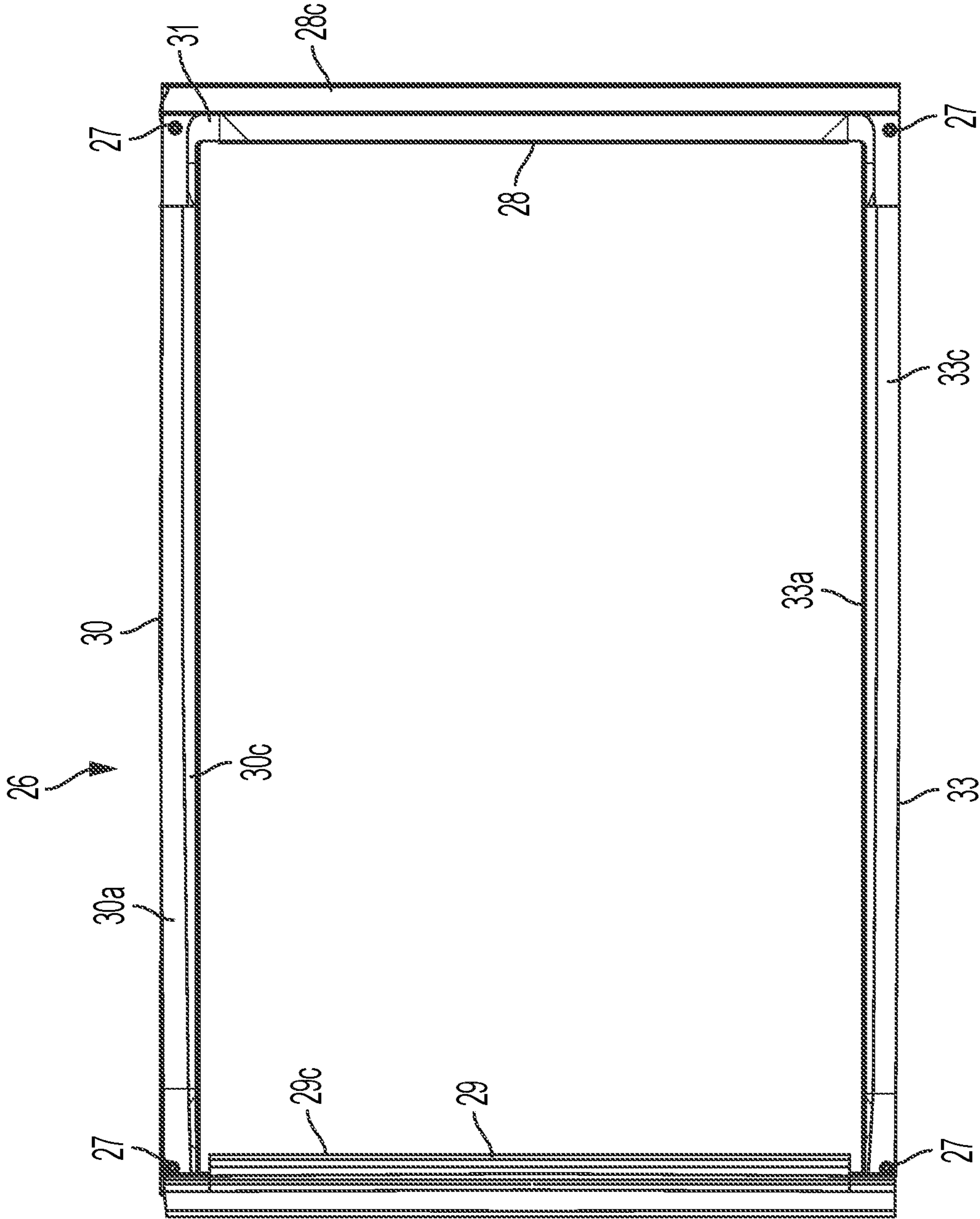


FIG. 3

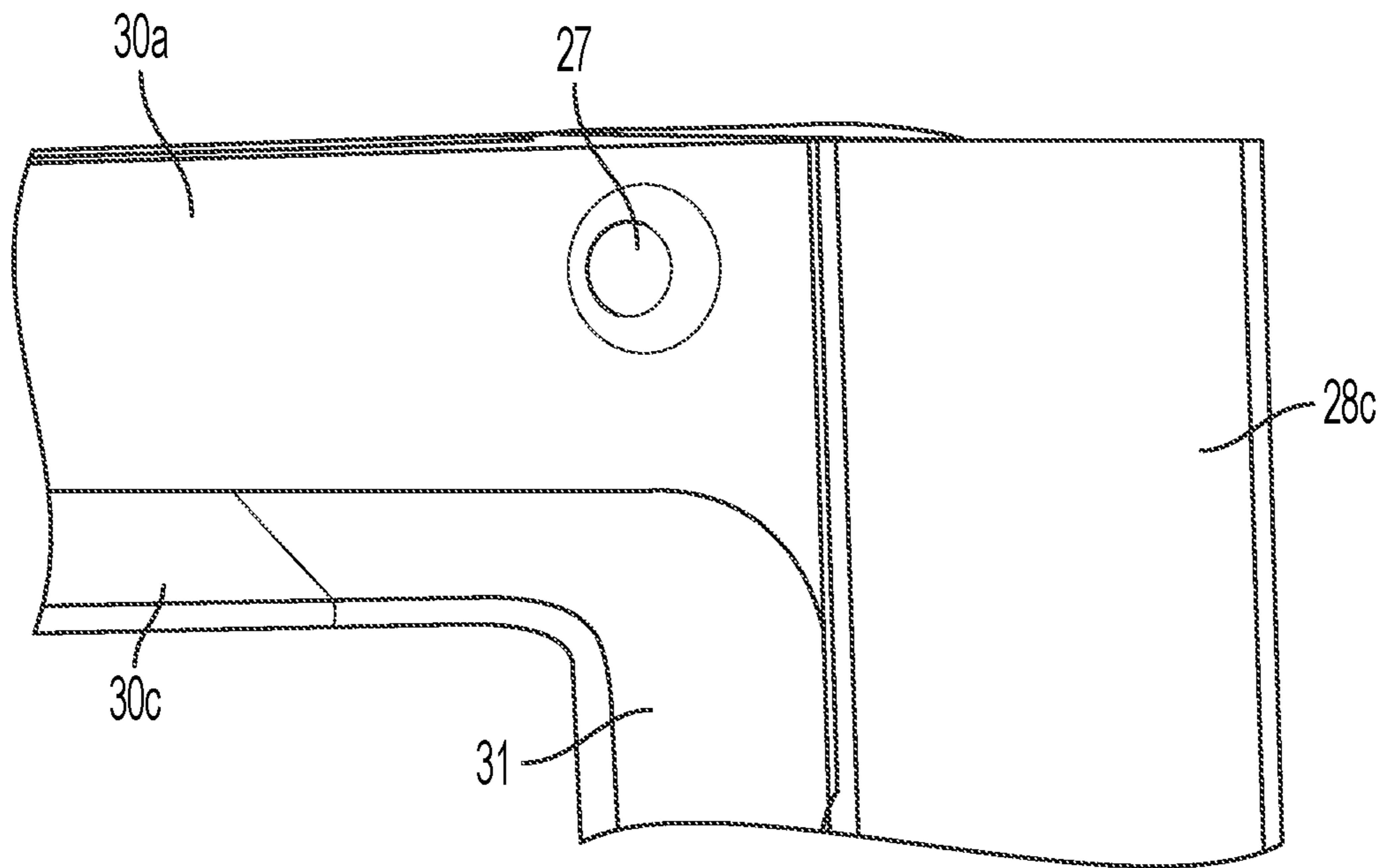


FIG. 4

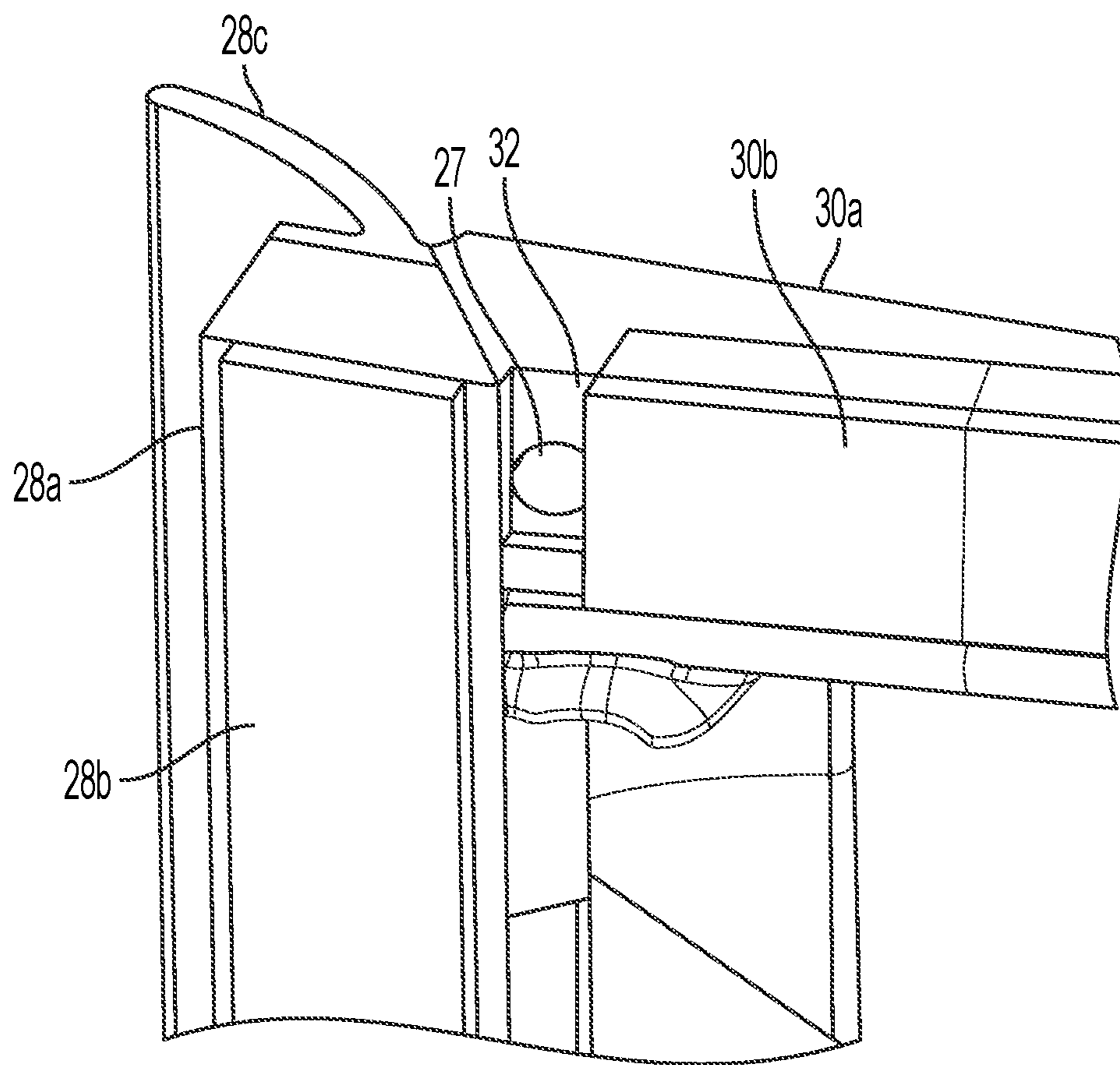


FIG. 5

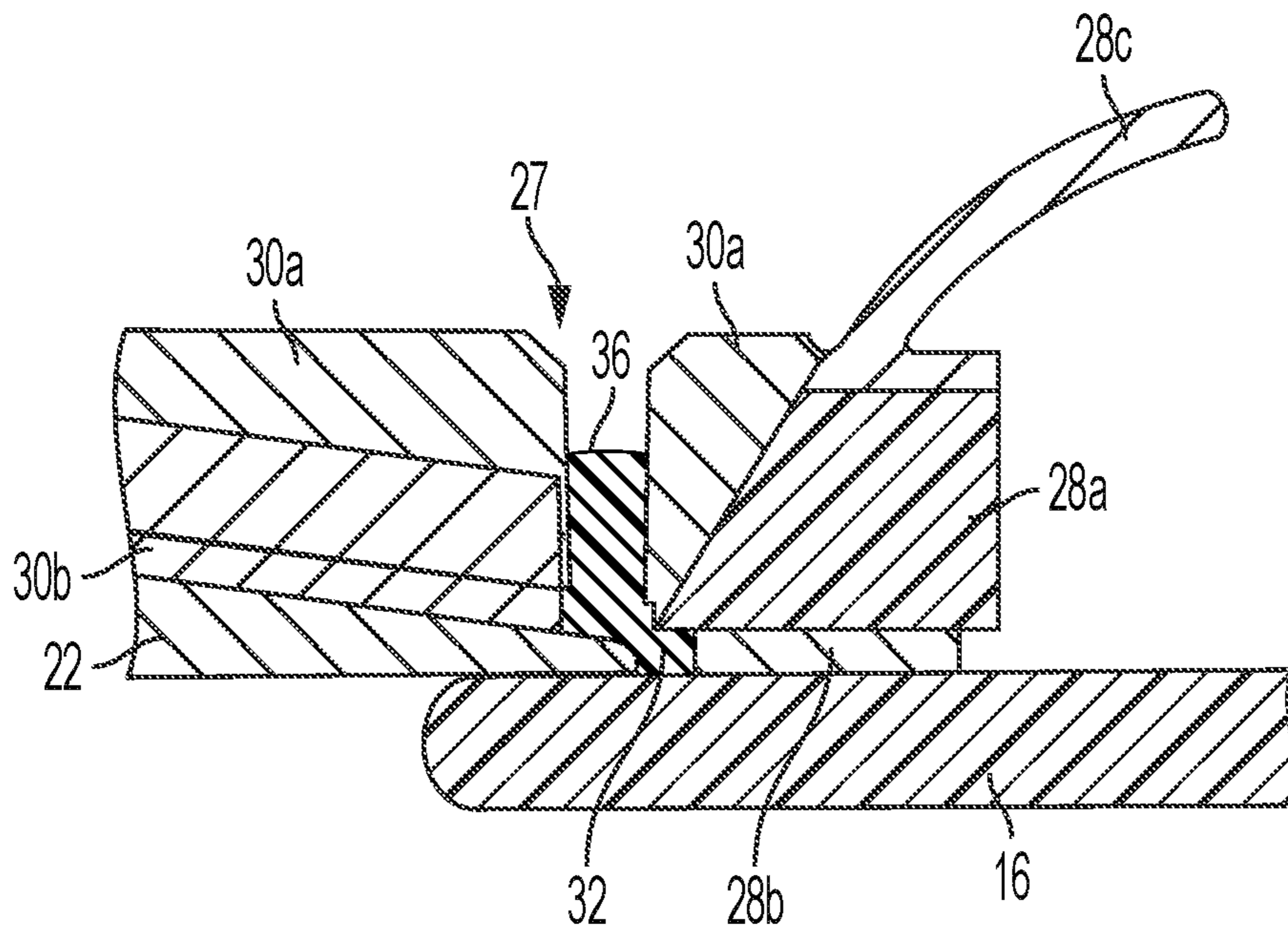


FIG. 6

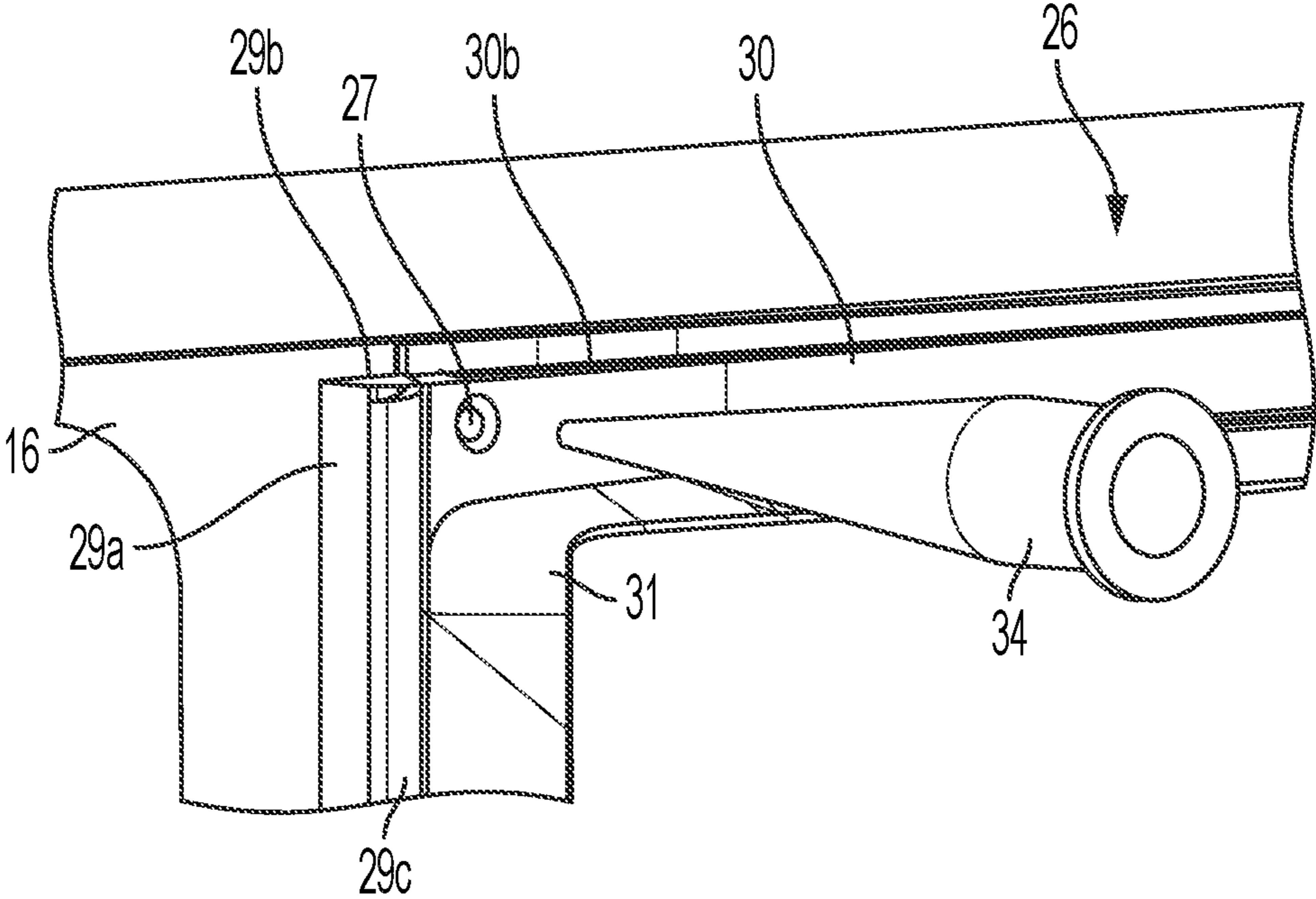


FIG. 7

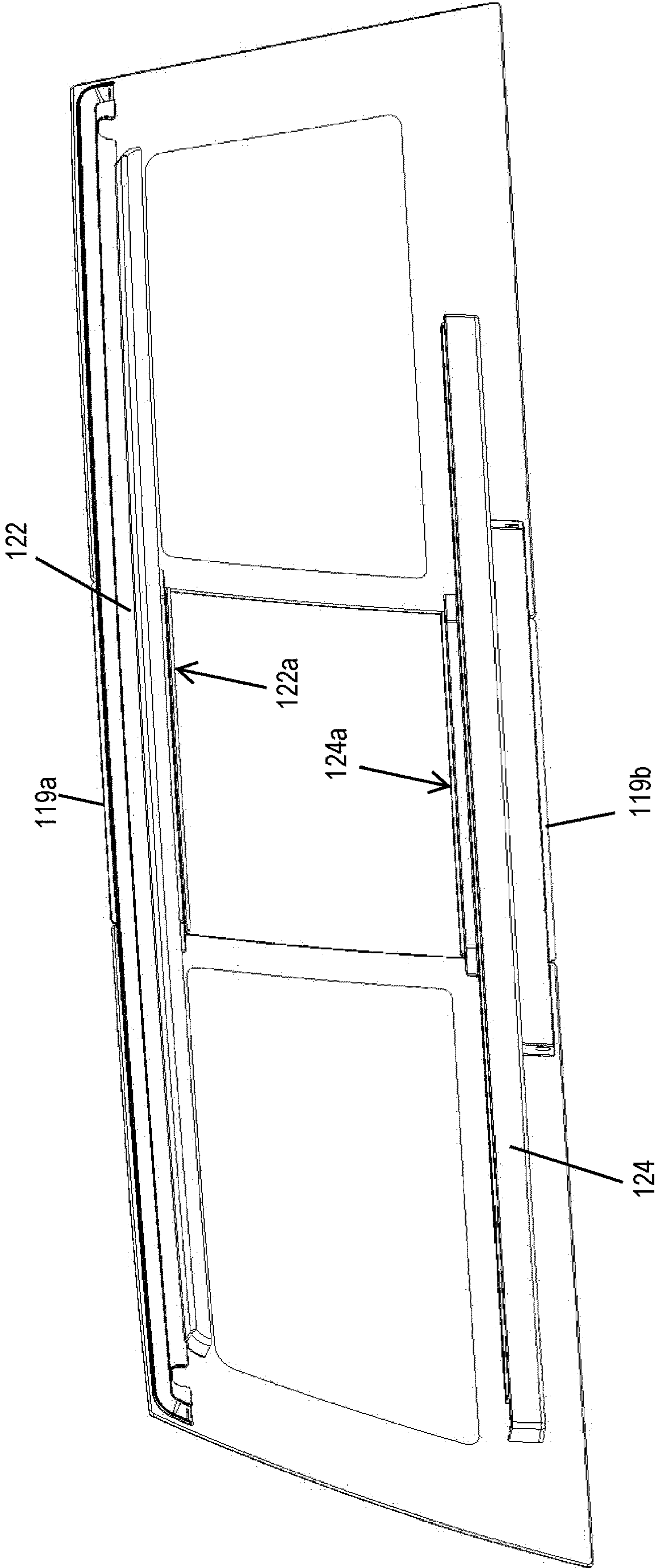


FIG. 8

1**SEALING SYSTEM FOR MOVABLE WINDOW OF VEHICULAR REAR SLIDER WINDOW ASSEMBLY****CROSS REFERENCE TO RELATED APPLICATION**

The present application claims the filing benefits of U.S. provisional application Ser. No. 62/704,970, filed Jun. 5, 2020, which is hereby incorporated herein by reference in its entirety.

FIELD OF THE INVENTION

The present invention relates to a window assembly for a vehicle and, more particularly, a rear slider window assembly for a vehicle and, more particularly, a rear slider window assembly for a pickup truck or the like.

BACKGROUND OF THE INVENTION

It is known to provide a slider window assembly for an opening of a vehicle, such as a rear slider window assembly for a rear opening of a pickup truck. Conventional slider window assemblies for rear openings of trucks or the like typically include two or more panels, such as one or two fixed window panels and a slidable window panel. The slidable window panel is supported by rails and may be moved along the rails to open and close the window. The slidable window panel may be manually moved or may be driven or moved by a cable drive system.

SUMMARY OF THE INVENTION

The present invention provides a vehicular rear slider window assembly that has a perimeter seal for sealing the movable window panel relative to at least one fixed window panel when the movable window panel is closed. The perimeter seal comprises elongated sealing portions with corner sealing tabs or lips molded or formed at the ends of respective elongated sealing portions. At least some of the sealing portions include a passageway at an end thereof for dispensing or injecting a sealant into the corner regions to fill and seal a gap present between adjacent ends of the attachment elements that attach the respective sealing portions to the at least one fixed window panel. The assembly process of the window assembly includes dispensing the sealant (such as via a dispensing device) into the passageways so that the sealant flows into and seals within the gaps.

These and other objects, advantages, purposes and features of the present invention will become apparent upon review of the following specification in conjunction with the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a rear perspective view of a pickup truck having a rear slider window assembly in accordance with the present invention;

FIG. 2 is a plan view of the rear slider window assembly, as viewed from inside the vehicle;

FIG. 3 is a plan view of the perimeter seal;

FIG. 4 is an enlarged perspective view of the inner facing side of a corner region of the perimeter seal;

FIG. 5 is an enlarged perspective view of the outer facing side of the corner region of the perimeter seal;

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FIG. 6 is a sectional view of the perimeter seal and window at the corner region;

FIG. 7 is a perspective view of another corner region of the perimeter seal, shown with a sealant injecting element disposed at the aperture through the seal; and

FIG. 8 is a perspective view of another rear slider window assembly that includes the perimeter seal.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings and the illustrative embodiments depicted therein, a rear slider window assembly **10** of a vehicle **12** (such as a pickup truck or the like) includes a fixed window panel **16** (or a pair of side fixed window panels or fixed window panel portions) having an opening established therethrough, and a movable window panel **20** that is movable relative to a frame portion or frame or rails **14** and the fixed window panel **16** between an opened position and a closed position (FIGS. 1 and 2). The rails include an upper rail **22** and a lower rail **24**, with the upper and lower edge regions of the movable window panel **20** (FIG. 1) movably or slidably received in and along the respective upper and lower rails **22**, **24**. The window assembly **10** includes a perimeter seal **26** disposed at the fixed window panel and around a window opening or aperture established between the side panel portions of the fixed window panel **16**. When the movable window panel is closed, the perimeter seal **26** seals against a perimeter region of the surface of the movable window panel that faces the fixed window panel. The perimeter seal **26** includes an aperture or hole **27** at each corner region to allow for injection of sealant into the corner region at the seal-to-window attachment interface to provide enhanced sealing at the corner regions where gaps may be present at the attachment interface, as discussed below.

In the illustrated embodiment, the window assembly comprises two fixed window panels or panel portions that are spaced apart so as to define an opening therebetween, with upper and lower appliqués or trim or filler panels or elements **19a**, **19b** (FIG. 8) disposed at the upper and lower regions of the opening and between the fixed window panels. Optionally, the window assembly may comprise a hole-in-glass window configuration, where the single fixed glass panel has an aperture or hole or opening established therethrough to define separate spaced apart fixed window panels or panel portions. The window assembly may utilize aspects of the window assemblies described in U.S. Pat. Nos. 8,915,018 and/or 8,881,458, and/or U.S. Publication No. US-2003-0213179, which are all hereby incorporated herein by reference in their entireties. The perimeter seal may utilize aspects of the sealing systems described in U.S. Pat. Nos. 10,239,397; 9,475,364 and/or 9,242,533, and/or U.S. Publication No. US-2020-0290443, which are hereby incorporated herein by reference in their entireties.

In the illustrated embodiment, the window assembly comprises two fixed window panels or panel portions that are spaced apart so as to define an opening therebetween, with upper and lower appliqués or trim or filler panels or elements **119a**, **119b** (FIG. 8) disposed at the upper and lower regions of the opening and between the fixed window panels. Optionally, the window assembly may comprise a hole-in-glass window configuration, where the single fixed glass panel has an aperture or hole or opening established therethrough to define separate spaced apart fixed window panels or panel portions. The window assembly may utilize aspects of the window assemblies described in U.S. Pat.

Nos. 8,915,018 and/or 8,881,458, and/or U.S. Publication No. US-2003-0213179, which are all hereby incorporated herein by reference in their entireties. The perimeter seal may utilize aspects of the sealing systems described in U.S. Pat. Nos. 10,239,397; 9,475,364 and/or 9,242,533, and/or U.S. Publication No. US-2020-0290443, which are hereby incorporated herein by reference in their entireties.

As shown in FIG. 3, the perimeter seal 26 comprises a continuous seal having elongated sealing portions, including side legs or portions 28 and upper and lower legs or portions 30. Each of the elongated sealing legs or portions 28, 30, has a respective elongated body portion or base portion 28a, 30a that has an attachment surface or element or portion 28b, 30b for attaching at a side or surface of the fixed window panel or panels and at rail attachment portions at the upper and lower appliqués and around the opening. For example, the attachment element may comprise an adhesive strip established along the body portion of the respective elongated sealing leg for adhesively attaching the perimeter seal 26 to the fixed window panels around the opening (such as to portions of the side or surface of the fixed window panel that have a darkened or opaque or non-light-transmissive coating established thereat).

As shown in FIG. 3, the perimeter seal 26 comprises a continuous seal having elongated sealing portions, including side legs or portions 28, 29 and upper and lower legs or portions 30, 33. Each of the elongated sealing legs or portions 28, 29, 30, 33 has a respective elongated body portion or base portion 28a, 29a, 30a, 33a that has an attachment surface or element or portion 28b, 29b, 30b for attaching at a side or surface of the fixed window panel or panels and at rail attachment portions at the upper and lower appliqués and around the opening. For example, the attachment element may comprise an adhesive strip established along the body portion of the respective elongated sealing leg for adhesively attaching the perimeter seal 26 to the fixed window panels around the opening (such as to portions of the side or surface of the fixed window panel that have a darkened or opaque or non-light-transmissive coating established thereat).

In the illustrated embodiment (and such as shown in FIG. 5), the attachment surfaces 28b, 29b, 30b comprise an adhesive tape that may be pressed against the window panel and against the rail attachment portion along the upper and lower legs to adhesively attach the seal 26 to the window panel around the aperture (optionally, the attachment surfaces may comprise a recessed surface that receives a bead of adhesive therein and that includes side walls that set the bond-line thickness of the adhesive at the window panel surface at which the perimeter seal is attached). The perimeter seal thus may be adhered or otherwise attached to the surface of the fixed window panel (with the adhesive strip attached at the back of the elongated body portion and having a removable film or cover that is removed to expose the adhesive for attaching at the window panel) around the opening (and optionally to a surface of a rail attachment portion 122a, 124a of the upper and/or lower rails 122, 124 that attaches the upper and/or lower rails to the window panel) so as to circumscribe the opening or aperture (or, for two fixed window panel configurations, the perimeter seal may be adhered or otherwise attached to the surfaces of the fixed window panels and to the upper and lower appliqués 119a, 119b and/or to portions of the upper and lower rails so as to circumscribe the opening, such as shown in FIG. 8).

Each of the elongated legs or portions 28, 29, 30, 33 of the perimeter seal 26 has a respective seal configuration comprising a respective sealing lip 28c, 29c, 30c, 33c established

along and optionally formed or extruded with the base portion 28a, 29a, 30a, 33a. The sealing lips 28c, 29c, 30c, 33c are configured to engage and seal against the movable window panel when the perimeter seal is disposed at the fixed window panel (so as to circumscribe the opening) and the movable window panel is disposed at the opening in a closed position.

Thus, the base portions 28a, 29a, 30a, 33a of the elongated portions 28, 29, 30, 33 include an attachment surface 28b, 29b, 30b at and along a first side and a sealing lip 28c, 29c, 30c, 33c at and along a second side opposite the first side. The attachment surfaces enable the perimeter seal 26 to be attached (at the first side of the perimeter seal) at the fixed window panel 16 and to receive the movable window panel 20 and provide a seal at the movable window panel via the second side of the perimeter seal. When disposed at the fixed window panel and rail attachment portions and/or upper and lower appliqués, the perimeter seal circumscribes the opening with the elongated side portions providing vertical seal portions at opposite sides of the opening and the elongated upper and lower portions providing horizontal seal portions at the top and bottom of the opening respectively. Also, the legs or seal portions 28, 29, 30, 33 may have their end regions joined to adjacent end regions of adjacent ones of the other sealing legs or portions via respective corner sealing elements 31, which may provide continuity between the respective sealing lips 28c, 29c, 30c, 33c of the side, upper, and lower seal portions (FIG. 4).

The perimeter seal 26 may comprise a unitarily formed seal that is formed via a multi-shot molding process. For example, the perimeter seal may be formed via a two (or more) shot injection molding process, which molds (such as via a plastic injection molding process) the base portions 28a, 29a, 30a, 33a during a first molding process or first shot, and which molds (such as via a plastic injection molding process) the sealing lips 28c, 29c, 30c, 33c along the respective base portions during a second molding process or second shot. For example, the base portions may be injection molded out of a rigid polypropylene material or the like, and the sealing lips may be overmolded along the base portions using a soft rubber material (such as a thermoplastic elastomer or Santoprene rubber material or the like). Optionally, the base portion and/or the sealing lips may comprise extruded elements, with the corner sections overmolded to join the extruded elongated sealing elements together.

The seal portions 28, 29, 30, 33 provide a desired sealing lip configuration for their particular application or position or orientation relative to the movable window panel. For example, one vertical seal portion 29 (i.e., one of the elongated side sealing portions) is at the side of the window opening at which the movable window panel will slide along as it is opened and closed, and thus may have a sealing lip configuration (e.g., a Y-shaped sealing lip configuration) that seals against the window panel as it is moved in either direction, while the other vertical seal portion 28 is at the opposite side of the window opening, where the movable window panel will be moved to when it is closed, and thus may have a sealing lip configuration that is configured for engagement with the window panel during only small movement of the window panel, and the upper and lower seal portions may have single flexible sealing lips that are configured to seal against the surface of the window panel as the window panel moves in a longitudinal direction along the seal portions.

As can be seen with reference to FIG. 5, the base portions 28a, 29a, 30a, 33a of the sealing legs join are aligned at the corner regions of the perimeter seal and the attachment

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elements or surfaces **28b**, **29b**, **30b** may have a gap **32** between adjacent ends at each of the corner regions. Thus, while the attachment elements **28b**, **29b**, **30b** maintain a substantially continuous seal circumscribing the opening in the window panel (i.e., the attachment element provides a portion of the perimeter seal in substantially continuous contact around the opening), the gaps **32** at the corner regions (between the attaching portions) comprise a portion of the perimeter seal that is not in direct contact with the surface of the window panel. The perimeter seal **26** includes the holes or apertures **27** at the corner regions and at the gaps **32** so that a sealant **36** may be injected through the holes **27** to fill the gap **32** with the perimeter seal disposed at the surface of the window. As shown in FIG. 6, the hole **27** is formed through the body or base portion **30a**, **33a** of the upper and lower seal portions **30**, **33** and terminates at the gap **32** between the end regions of the attachment elements or surfaces or tape **28b**, **29b**, **30b** (e.g., between an end of one element **30b** and a side of the end region of the other element **28b**).

As can also be seen with reference to FIG. 6, the upper and lower seal portions may attach at the rail attachment portion of the respective upper and lower rails **22**, **24**, which results in the end regions of the upper/lower sealing member and the side sealing member attaching at surfaces at different levels. For example, the elongated upper/lower sealing member disposed at the respective upper/lower rail may be raised or offset from the glass surface relative to the elongated side sealing member disposed at the glass surface of the window. The gap thus includes a gap between the adjacent ends of the attachment elements **28b**, **29b**, **30b** and between the rail attachment portion and the attachment element of the elongated side sealing portion **28b**, **29b** that attaches at the glass surface of the fixed window panel. In the illustrated embodiment, the holes are formed at both end regions of each of the upper and lower seal portions, but could be formed through the end regions of the side seal portions. As shown in FIG. 7, the aperture or hole **27** may have a tapered opening or port at an access side of the perimeter seal (the side opposite of the side of the perimeter seal that attaches to the fixed window panel) to ease alignment and insertion or partial insertion of a sealant injection nozzle or tool **34** at the hole **27**.

Thus, during assembly of the window assembly, the perimeter seal is adhered to the fixed glass window panels (such as by removing the film from the adhesive tape and pressing the seal and tape against the inner surface of the fixed window panels) and may be adhered to the upper and lower appliques (if applicable) and/or to the rail attachment portion of the upper rail and/or lower rail. The perimeter seal is attached to the respective surfaces such that the attachment elements **28b**, **29b**, **30b** provide a seal surrounding the opening in the window panel that is continuous except for gaps **32** that may be present between the attachment elements in the corner regions of the perimeter seal. After the perimeter seal is attached at the surfaces, the sealant is injected into each of the holes **27** to flow through the hole or passageway and to fill the gaps **32** between the attachment surfaces or elements **28b**, **29b**, **30b**. The sealant injection tool may be robotically controlled and may move the injection nozzle partially into the hole and inject a predetermined or appropriate amount of sealant into the hole. The amount of sealant is determined depending on the particular window assembly and typical gap between the attachment elements, such that enough sealant is measured or metered

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and dispensed or injected into the gap but not so much that the sealant flows out of the gap onto a visible portion of the window panel.

Thus, the perimeter seal of the present invention may be formed to provide a continuous perimeter seal about an opening of a rear slider window assembly (or other type of window assembly). The elongated sealing legs or portions may comprise extruded sealing elements that are extruded or otherwise formed of a flexible rubber material (or any suitable sealing material). The corners or junctions of the sealing legs may be molded or joined together (such as at the base portions **28a**, **29a**, **30a**, **33a**) and an additional sealing lip may be provided or established at the corner region (such as by overmolding the additional sealing lip (such as via injection molding or the like) as part of the sealing lips at the end regions of the vertical sealing leg so as to limit water intrusion at the corner regions. The corner regions between adjacent ends of respective elongated sealing legs or portions include gaps between the attachment elements of the sealing portions, into which a sealant can be injected through a hole at each corner region, whereby the sealant fills the gaps and seals the perimeter seal against the window panel or panels (and optionally the appliques and/or rail attachment portions as well) around the entire periphery of the perimeter seal. Each corner region includes a respective hole, even though a gap may not be present at each of the corner regions (such as in situations where the base portions abut one another at the respective corner region). The perimeter seal is attached or adhered to the glass surface of the fixed window panel so that the perimeter seal provides a continuous sealing lip about its periphery and fully circumscribes the opening of the window with a continuous sealing lip and is fully sealed at the window panel or panels around the opening. Thus, the present invention provides for enhanced sealing at the window seal with filled gaps or no gaps or leaks between sealing lips or attachment elements around the window opening.

Although shown and described as a horizontally movable center window that moves relative to a pair of opposite side windows (such as for applications at the rear of a cab of a pickup truck or the like), it is envisioned that the present invention is applicable to other types of movable window assemblies, such as horizontally movable window panels that move relative to a single fixed window panel and/or frames (such as for a rear or side opening of a vehicle or the like), and/or such as vertically movable window panels that move relative to one or more fixed panels and/or frames (such as for a rear or side opening of a vehicle or the like), while remaining within the spirit and scope of the present invention.

Optionally, the fixed window panel and movable window panel of the window assembly of the present invention may include one or more electrically conductive elements, such as heater grids or the like, which may be powered utilizing aspects of the window assemblies described in U.S. Pat. Nos. 8,402,695 and/or 8,881,458, which are hereby incorporated herein by reference in their entireties. The window assembly may include a heater grid on each of the fixed window panels and on the movable window panels, with a heating system that provides power to the heater grid on the movable window panel irrespective of the position of the movable window panel relative to the fixed window panel and throughout the range of movement of the movable window panel between its opened and closed positions, such as by utilizing aspects of the window assemblies described in U.S. Pat. Nos. 8,402,695 and/or 8,881,458, incorporated above.

Optionally, the window assembly or assemblies of the present invention may utilize aspects of the window assemblies described in U.S. Pat. Nos. 8,915,018; 8,881,458; 8,402,695; 7,073,293; 7,003,916; 6,119,401; 6,026,611; 5,996,284; 5,799,444 and/or 6,691,464, and/or U.S. Publication Nos. US-2014-0047772; US-2006-0107600; US-2008-0127563; US-2004-0020131 and/or US-2003-0213179, all of which are hereby incorporated herein by reference in their entireties.

Changes and modifications to the specifically described embodiments may be carried out without departing from the principles of the present invention, which is intended to be limited only by the scope of the appended claims, as interpreted according to the principles of patent law.

The invention claimed is:

1. A vehicular slider window assembly, the vehicular slider window assembly comprising:

at least one fixed window panel, the at least one fixed window panel defining an opening;

an upper rail and a lower rail attached to the at least one fixed window panel;

a movable window panel that is movable along the upper rail and the lower rail, wherein the movable window panel is movable between a closed position, where the movable window panel covers the opening, and an opened position, where the movable window panel is moved at least partially along the at least one fixed window panel from the closed position;

a perimeter seal attached to a surface of the at least one fixed window panel, wherein the perimeter seal comprises a continuous sealing element that circumscribes the opening and that is configured to seal against a surface of the movable window panel about a periphery of the movable window panel when the movable window panel is in the closed position;

wherein the perimeter seal comprises a plurality of elongated sealing portions including an elongated upper sealing portion, an elongated lower sealing portion, a first elongated side sealing portion and a second elongated side sealing portion, and wherein the elongated sealing portions comprise respective elongated sealing lips disposed along respective base portions;

wherein the respective base portions of the elongated sealing portions have attachment elements disposed therealong, and wherein, with the attachment elements attached to the surface of the at least one fixed window panel, the attachment elements attach a first side of the respective perimeter seal at the surface of the at least one fixed window panel;

wherein the respective base portions of the elongated sealing portions are joined at respective corner regions, and wherein adjacent end regions of the attachment elements are spaced from one another at the respective corner regions such that there is a gap between the adjacent end regions of the respective attachment elements at the respective corner regions;

wherein, with the attachment elements attached to the surface of the at least one fixed window panel, the first side of the perimeter seal faces the surface of the at least one fixed window panel and a second side of the perimeter seal that is opposite the first side faces away from the surface of the at least one fixed window panel and is spaced from the surface of the at least one fixed window panel;

wherein each of the corner regions of the perimeter seal has a respective passageway that is formed through the base portion at the respective corner regions and that

extends from the second side of the perimeter seal and terminates at the respective gap, and that is accessible at the second side of the perimeter seal;

wherein, with the attachment elements attached to the surface of the at least one fixed window panel, each of the respective passageways formed through the base portion at the respective corner regions extends from a respective opening at the second side of the perimeter seal and through the base portion at the corner region toward the surface of the at least one fixed window panel, and wherein the respective passageway at each of the corner regions of the perimeter seal fluidly connects the respective opening at the second side of the perimeter seal and the surface of the at least one fixed window panel at the respective gap; and

wherein, with the attachment elements attached to the surface of the at least one fixed window panel, each of the respective gaps is configured to receive a sealant that is dispensed into the gaps via the respective openings and passageways to fill the gaps and to seal the corner regions of the perimeter seal to the at least one fixed window panel.

2. The vehicular slider window assembly of claim **1**, wherein each of the respective openings comprises a tapered opening or access port.

3. The vehicular slider window assembly of claim **1**, wherein the passageways are formed through respective end regions of each respective base portion of the upper and lower sealing portions.

4. The vehicular slider window assembly of claim **1**, wherein the at least one fixed window panel comprises first and second fixed window panels defining the opening therebetween.

5. The vehicular slider window assembly of claim **4**, wherein the perimeter seal is adhesively attached to the first and second fixed window panels and to respective surfaces of upper and lower appliqués so as to circumscribe the opening.

6. The vehicular slider window assembly of claim **5**, wherein the upper rail comprises an upper rail attachment portion that attaches to the first and second fixed window panels and to the upper appliqué, and wherein the perimeter seal is adhesively attached to respective surfaces of the first and second fixed window panels and to at least a portion of the upper rail attachment portion attached to the upper appliqué.

7. The vehicular slider window assembly of claim **6**, wherein the elongated upper sealing portion is adhesively attached to at least a portion of the upper rail attachment portion, and wherein the elongated lower sealing portion, the first elongated side sealing portion, and the second elongated side sealing portion are adhesively attached to respective surfaces of the first and second fixed window panels.

8. The vehicular slider window assembly of claim **7**, wherein the attachment elements of the respective first and second elongated side and upper sealing portions are laterally offset from one another at the respective corner regions such that respective gaps are (i) between the adjacent end regions of the respective attachment elements of the respective first and second elongated side and upper sealing portions, and (ii) between the attachment elements of the first and second elongated side sealing portions and respective end regions of the upper rail attachment portion.

9. The vehicular slider window assembly of claim **6**, wherein the lower rail comprises a lower rail attachment portion that attaches to the first and second fixed window

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panels and to the lower appliqué, and wherein the elongated upper sealing portion is adhesively attached to at least the portion of the upper rail attachment portion attached to the upper appliqué, the elongated lower sealing portion is adhesively attached to at least a portion of the lower rail attachment portion attached to the lower appliqué, and the first and second elongated side sealing portions are adhesively attached to the respective surfaces of the first and second fixed window panels.

10. The vehicular slider window assembly of claim **9**, wherein the attachment elements of the respective first and second elongated side, upper, and lower sealing portions are laterally offset from one another at the respective corner regions such that respective gaps are (i) between the adjacent end regions of the respective attachment elements of the first and second elongated side, upper, and lower sealing portions, and (ii) between the attachment elements of the first and second elongated side sealing portions and respec-

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tive end regions of the upper and lower rail attachment portions.

11. The vehicular slider window assembly of claim **1**, wherein the at least one fixed window panel comprises a single fixed window panel having the opening therethrough, and wherein the perimeter seal is adhesively attached to the single fixed window panel so as to circumscribe the opening.

12. The vehicular slider window assembly of claim **1**, wherein the elongated sealing lip of the elongated upper sealing portion comprises a single sealing lip, and wherein the elongated sealing lip of the elongated lower sealing portion comprises a single sealing lip.

13. The vehicular slider window assembly of claim **12**, wherein the elongated sealing lip of the second elongated side sealing portion comprises a single sealing lip configured to engage the movable window panel when the movable window panel is in the closed position.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 11,912,110 B2
APPLICATION NO. : 17/303601
DATED : February 27, 2024
INVENTOR(S) : Darin J. Snider et al.

Page 1 of 2

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Specification

Column 2, Lines 37-67 and Column 3, Lines 1-7

Delete the paragraphs and replace with:

--In the illustrated embodiment, the window assembly comprises two fixed window panels or panel portions that are spaced apart so as to define an opening therebetween, with upper and lower appliques or trim or filler panels or elements 119a, 119b (FIG. 8) disposed at the upper and lower regions of the opening and between the fixed window panels. Optionally, the window assembly may comprise a hole-in-glass window configuration, where the single fixed glass panel has an aperture or hole or opening established therethrough to define separate spaced apart fixed window panels or panel portions. The window assembly may utilize aspects of the window assemblies described in U.S. Pat. Nos. 8,915,018 and/or 8,881,458, and/or U.S. Publication No. US-2003-0213179, which are all hereby incorporated herein by reference in their entireties. The perimeter seal may utilize aspects of the sealing systems described in U.S. Pat. Nos. 10,239,397; 9,475,364 and/or 9,242,533, and/or U.S. Publication No. US-2020-0290443, which are hereby incorporated herein by reference in their entireties.

The upper and lower rails 22, 24 may comprise any suitable channel or rail element configured to slidably receive an upper or lower edge portion of the movable window panel. The movable window panel 20 is movable along the lower rail 24 and the upper rail 22 of the frame portion 14 to open and close the aperture or opening, such as in a manner similar to known slider window assemblies. The movable window panel 20 may include or may be disposed at a lower carrier, which may receive the lower perimeter edge region of the slider window panel 20 therein and is slidably or movably received in the channel portion of the lower rail 24 of frame portion 14. The rails and window assembly may utilize aspects of the rails and window assemblies described in U.S. Pat. No. 10,023,026, which is hereby incorporated herein by reference in its entirety.--

Column 3

Delete the duplicate paragraph at Lines 8-23

Signed and Sealed this
Ninth Day of April, 2024
Katherine Kelly Vidal

Katherine Kelly Vidal
Director of the United States Patent and Trademark Office

Column 6

Add the following paragraph at Line 38:

--The movable or slider window panel 20 is thus movable between its opened and closed positions and along the sealing elements, which maintain sealing engagement with the window panel as it moves along the rails 22, 24 of the window assembly. The movable window panel may be movable via any suitable means, such as via manual pushing or pulling at the window panel and/or in response to actuation of a drive motor of a drive motor assembly or system, which may move cables or wires of cable assemblies relative to a sheath of the cable assemblies or the like to impart horizontal movement of the slider window panel 20 along the rails 22, 24. Optionally, the drive motor assembly may utilize aspects of the drive assemblies of the types described in U.S. Pat. Nos. 4,920,698; 4,995,195; 5,146,712; 5,531,046; 5,572,376; 6,955,009 and/or 7,073,293, and/or U.S. Publication Nos. US-2019-0383084; US-2004-0020131 and/or US-2008-0127563, which are all hereby incorporated herein by reference in their entireties.--